

IN THE CLAIMS:

Please cancel Claim 14 without prejudice or disclaimer of subject matter, and amend Claims 1, 8, 13 and 15 as shown below. The claims, as pending in the subject application, read as follows:

1. (Currently Amended) An inspection apparatus comprising:

a substrate having integrated therein a structure for holding an inspected object;

an electromagnetic terahertz wave transmitting portion having an antenna structure for irradiating the inspected object with an electromagnetic terahertz wave; and

an electromagnetic terahertz wave receiving portion having an antenna structure for receiving the electromagnetic terahertz wave,

wherein the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion are disposed on opposite sides of the substrate facing each other with the substrate therebetween and are in contact with the substrate, and

the structure for holding the inspected object is between the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion.

2. (Previously Presented) The inspection apparatus according to claim 1, wherein an electromagnetic terahertz wave generated in the electromagnetic terahertz wave transmitting portion propagates through the substrate, and the electromagnetic terahertz wave receiving portion receives an electromagnetic terahertz wave which is changed when the inspected object is disposed in an electromagnetic wave propagation path.

3. (Previously Presented) The inspection apparatus according to claim 1, wherein the structure for holding the inspected object comprises a plurality of portions for holding the inspected object, periodically disposed to form a resonant structure.

4. (Previously Presented) The inspection apparatus according to claim 1, wherein at least one of the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion comprises a negative resistance element.

5. (Previously Presented) The inspection apparatus according to claim 1, wherein at least one of the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion is connected to a high frequency circuit via a waveguide, for allowing an electromagnetic terahertz wave to propagate therethrough.

6. (Previously Presented) The inspection apparatus according to claim 1, wherein each of the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion has both a function of transmitting an electromagnetic terahertz wave and a function of receiving an electromagnetic terahertz wave.

7. (Cancelled)

8. (Currently Amended) The inspection apparatus according to claim 1, further comprising:

generation means for allowing the electromagnetic terahertz wave transmitting

portion to generate an electromagnetic terahertz wave of a desired frequency band;

detection means for allowing the electromagnetic terahertz wave receiving portion to detect an electromagnetic terahertz wave propagated through the substrate;

a database for preliminarily storing physical characteristics of the inspected object; and

an analyzing portion for ~~collating~~ correlating an information ~~to~~ of an electromagnetic terahertz wave detected by the detection means with an information stored in the database to inspect the inspected object.

9. (Original) The inspection apparatus according to claim 8, wherein the generation means is a laser oscillator.

10. (Previously Presented) The inspection apparatus according to claim 1, wherein the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion are formed along a direction perpendicular to a thickness direction of the substrate.

11. (Cancelled)

12. (Previously Presented) The inspection apparatus according to claim 1, wherein the structure extends from one end of the substrate to the other end of the substrate, parallel to the surface of the substrate.

13. (Currently Amended) The inspection apparatus according to claim 1, further comprising an inspected object insertion means for inserting the inspected object from outside into the structure,

wherein the inspected object insertion means uses inkjet technology to perform insertion by jetting.

14. (Cancelled)

15. (Currently Amended) An inspection apparatus comprising:
a substrate having integrated therein a structure for holding an inspected object;
an electromagnetic terahertz wave transmitting portion having an antenna structure for irradiating the inspected object with an electromagnetic terahertz wave;
an electromagnetic terahertz wave receiving portion having an antenna structure for receiving the electromagnetic terahertz wave; and
an inspected object insertion means for inserting the inspected object from outside the structure,

wherein the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion are disposed to face each other with the substrate therebetween, and are in contact with the substrate, and

the inspected object insertion means uses physical phenomenon at an interface, corresponding to a capillary phenomenon, to perform insertion.